

ABSTRACT

An optical head reproduces optical disks of different disk plate thickness t_1 (0.6 mm) or t_2 (1.2 mm) by using light beams of two wavelengths and one object lens.

5 An converging element comprises a central portion and outer portion, wherein the central portion has optimum design plate thickness of $0.6 \cdot t_1$ to t_1 and the outer portion has optimum design plate thickness of 0.6 mm. By providing a step difference in the converging element, information can

10 be recorded or reproduced for an information medium of disk plate thickness t_1 and for an information medium of disk plate thickness t_2 , in a state having small side lobes.

Alternatively, a step difference is provided in the object lens, and optical distance L_2 from a second light source to

15 a condensing optical system is set to 80 to 95 % of optical distance L_1 from a first light source to the condensing optical system. Alternatively, only light of first wavelength is shielded or diffracted in a ring-like shape.